

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

Applicant's or agent's file reference PCT-215	FOR FURTHER ACTION	See item 4 below
International application No. PCT/JP2004/016614	International filing date (<i>day/month/year</i>) 02 November 2004 (02.11.2004)	Priority date (<i>day/month/year</i>) 02 December 2003 (02.12.2003)
International Patent Classification (8th edition unless older edition indicated) See relevant information in Form PCT/ISA/237		
Applicant NISSAN MOTOR CO., LTD.		

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).

2. This REPORT consists of a total of 6 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

- | | | |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I | Basis of the report |
| <input type="checkbox"/> | Box No. II | Priority |
| <input type="checkbox"/> | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |
| <input checked="" type="checkbox"/> | Box No. IV | Lack of unity of invention |
| <input checked="" type="checkbox"/> | Box No. V | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/> | Box No. VI | Certain documents cited |
| <input type="checkbox"/> | Box No. VII | Certain defects in the international application |
| <input type="checkbox"/> | Box No. VIII | Certain observations on the international application |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No. +41 22 338 82 70	Date of issuance of this report 27 July 2006 (27.07.2006) Authorized officer <div style="text-align: center; font-weight: bold; font-size: 1.2em;">Yoshiko Kuwahara</div> e-mail: pt07@wipo.int
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PATENT COOPERATION TREATY

TRANSLATION

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing
(day/month/year)

Applicant's or agent's file reference

PCT-215

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/JP2004/016614

International filing date (day/month/year)

02.11.2004

Priority date (day/month/year)

02.12.2003

International Patent Classification (IPC) or both national classification and IPC

Applicant

NISSAN MOTOR CO., LTD.

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☒ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP

Authorized officer

Facsimile No.

Telephone No.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/016614

Box No. I

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language
_____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/016614

Box No. IV Lack of unity of invention

1. ☒ In response to the invitation (Form PCT/ISA/206) to pay additional fees the applicant has:
- ☒ paid additional fees
 - ☐ paid additional fees under protest
 - ☐ not paid additional fees
2. ☐ This Authority found that the requirement of unity of invention is not complied with and chose not to invite the applicant to pay additional fees.
3. This Authority considers that the requirement of unity of invention in accordance with Rules 13.1, 13.2 and 13.3 is
- ☐ complied with
 - ☒ not complied with for the following reasons:

For a group of inventions described in patent claims to satisfy the requirement of unity, the inventions of this group have to be linked so as to form a single general inventive concept. For this purpose the existence of a special technical feature is required. However, judging by the description of the claims, with respect to the group of inventions described in claims 1-30 of the present international application, there does not exist a technical feature linking this group of inventions so as to form a single general inventive concept.

Therefore, the inventions of the group described in claims 1-30 of the present international application do not satisfy the requirement of unity of inventions.

Then, the number of groups of inventions for which a special technical feature required to link the inventions so as to form a general inventive concept, that is, the number of inventions described in the claims of the present international application was studied.

From among the inventions of claims 1-30, there are five inventions described in independent claims, those being the inventions of claims 1, 11, 12, 16, 23. The inventions of claims 2-10 are described by citing claim 1. The inventions of claims 13-15 are described by citing claim 12. The inventions of claims 17-22 are described by citing claim 16. The inventions of claims 24-30 are described by citing claim 23. Furthermore, judging by the description of the claims, the inventions of claims 1, 11, and 12 are linked by a technical feature relating to "a method for the manufacture of a fuel cell by which a fuel cell is manufactured by subjecting an electrolyte film to a predetermined treatment" described in claim 1, and the inventions of claims 16 and 23 are linked by a technical feature relating to "a method for the manufacture of a fuel cell in which electrolyte films and separators are stacked alternately" as described in claim 16. Furthermore, other technical features linking multiple inventions were not discovered.

Accordingly, two inventions divided into "1-15" and "16-30" are described in the claims of the present international application.

4. Consequently, this opinion has been established in respect of the following parts of the international application:

- ☒ all parts
- ☐ the parts relating to claims Nos. _____

**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.

PCT/JP2004/016614

Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	1-30	YES
	Claims		NO
Inventive step (IS)	Claims	8-9, 14-30	YES
	Claims	1-7, 10-13	NO
Industrial applicability (IA)	Claims	1-30	YES
	Claims		NO
2. Citations and explanations:			
<p>Document 1: JP 2001-236971 A (Fuji Electric Co., Ltd.), 31 August 2001, Full text, Fig. 1 to Fig. 6</p> <p>Document 2: JP 2002-313354 A (Nippon Steel Corp.), 25 October 2002, Par. Nos. 0017-0018, Fig. 10</p> <p>Document 3: JP 2001-148252 A (Honda Motor Co., Ltd.), 29 May 2001, Par. Nos. 0023-0029, Fig. 1 to Fig. 2 & EP 1083616 A2 & US 6686085 B1</p> <p>Document 4: JP 2003-45462 A (Honda Motor Co., Ltd.), 14 February 2003, Par. Nos. 0020-0023, Fig. 3 & US 2003/0022046 A1 & EP 1283558 A2</p> <p>Document 5: JP 2003-151611 A (Honda Motor Co., Ltd.), 23 May 2003, Par. Nos. 0014-0016, Fig. 1</p> <p>Document 6: JP 2003-22810 A (Honda Motor Co., Ltd.), 24 January 2003, Par. Nos. 0027-0028, Fig. 2</p> <p>The inventions of claims 1, 11-12 do not appear to involve an inventive step based on documents 1-5 cited in the ISR. Using a well-known electrolyte membrane for a fuel cell in which holes were formed in a row with a fixed spacing on both sides, as described, for example, in documents 3-5 as an electrolyte membrane when employing a well-known technical feature of feeding a strip-shaped body for a fuel cell, as described in document 2, in which holes for conveying are formed in a row with a fixed spacing in the lengthwise direction on both sides by the rotation of a conveying roller comprising protrusions for engaging with holes for conveying on the outer periphery and conducting the predetermined treatment at the predetermined treatment timing that was set based on the rotation speed of a conveying roller in a method for manufacturing a fuel cell by subjecting a strip-shaped electrolyte membrane to the predetermined treatment at the predetermined treatment timing that was set based on the rotation speed of a conveying roller and a manufacturing method therefore as described in document 1 would be easy for a person skilled in the art.</p> <p>The inventions described in claims 2-4, 13 do not appear to involve an inventive step based on documents 1-5 cited in the ISR. Document 1 describes a method for the manufacture of a fuel cell in which an electrolytic membrane having catalytic layers formed on the surface thereof with a fixed spacing is subjected to the predetermined treatment with the predetermined timing on the catalyst layers and a manufacturing device thereof. Setting the predetermined timing based on the rotation speed of the conveying roller and the positioning marks indicating the formation positions of catalyst layers that can be read with a sensor would be easy for a person skilled in the art.</p>			

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2004/016614

Supplemental Box

In case the space in any of the preceding boxes is not sufficient.

Continuation of: Box V.2

The inventions of claims 5-6, 10 do not appear to involve an inventive step based on documents 1-5 cited in the ISR. Document 1 describes a method for the manufacture of a fuel cell by which an electrolytic solution is applied to a catalyst layer, a gas diffusion layer is bonded by thermal compression, and a separator is adhesively bonded to the gas diffusion layer.

The invention of claim 7 does not appear to involve an inventive step based on documents 1-6 cited in the ISR. Applying a well-known method for the manufacture of a fuel cell by bonding a separator coated with a sealing agent to a gas diffusion layer provided on an electrolyte film, as described in document 6, in the method for the manufacture of a fuel cell described in document 1 would be easy for a person skilled in the art.

The novelty and inventive step of the inventions described in claims 8-9, 14-30 are not refuted by the documents cited in the ISR.